ABSTRACT OF THE DISCLOSURE

A surface coating material for heat collector elements (HCE) of solar plants, is a multi-layer structure comprising a lower infrared-reflecting metal layer, an upper layer of a non-reflecting material, and an intermediate layer of a composite ceramic-metallic (CERMET) material having upper and lower layers of different volumetric metal fractions. The lower layer has a volumetric metal fraction higher than that of the upper CERMET layer. The ceramic matrix of the CERMET is formed by amorphous silicon dioxide (SiO_2). The reflecting metal layer has a thickness ranging from 90 to 110nm. The lower CERMET layer has a thickness ranging from 70 to 80nm and a volumetric metal fraction in the range from 0.45 to 0.55. The upper CERMET layer has a thickness ranging from 70 to 80nm and volumetric metal fraction ranging from 0.15 to 0.25. The layer of anti-reflecting material layer has a thickness ranging from 65 to 75nm.